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Town of Uxbridge – Comprehensive Wastewater Management Planning

Board of Selectmen Update No. 4

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April 27th, 2015

Agenda

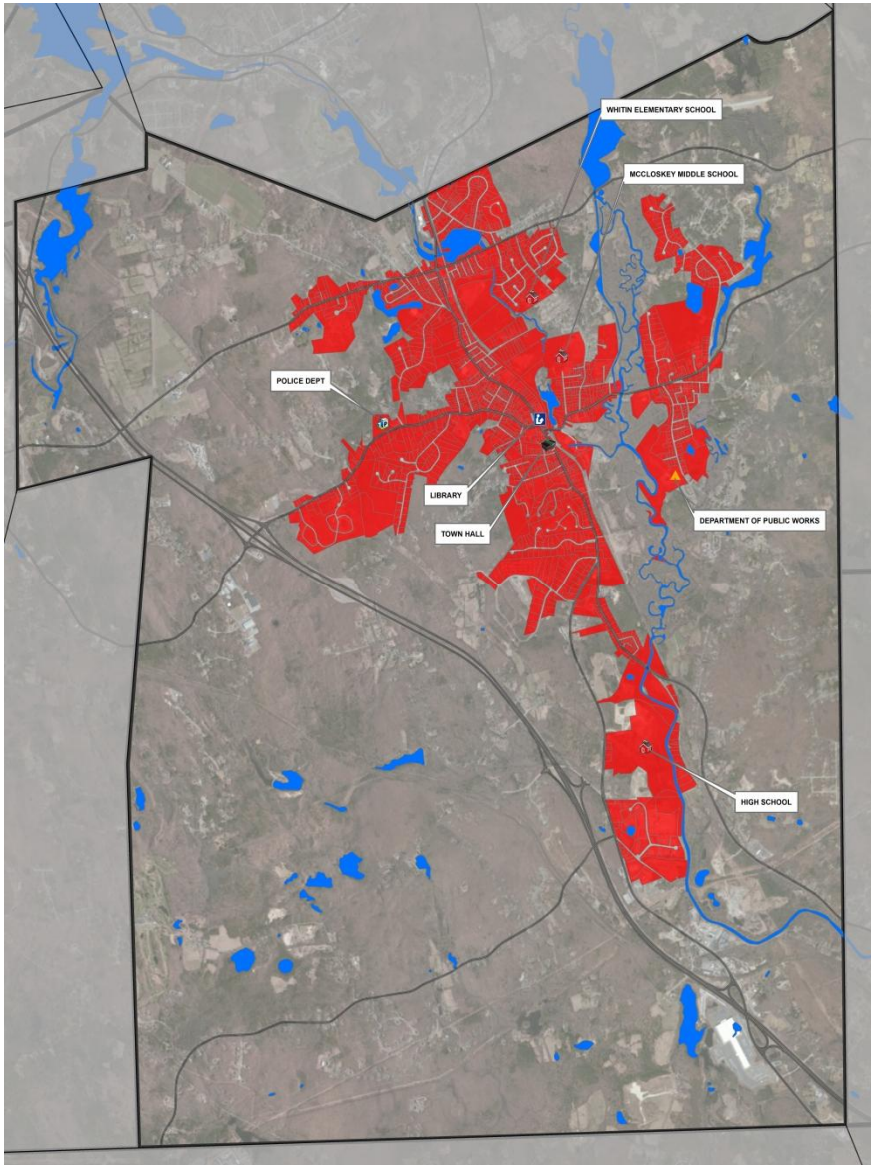
- Background
- CWMP Makeup
- Two Questions for Recommended Plan Development
  - Continued Acceptance of Septage at Uxbridge WWTF
  - Financing Options for Recommended Plan

Background

Date	Event
2010	DPW was notified by EPA* that a new discharge permit** for the wastewater treatment facility would be issued soon
2010/2011	DPW completed an abbreviated evaluation of the existing wastewater treatment facility
June 2013	EPA issued a discharge permit; Town options were to negotiate a schedule to come into compliance or face fines of non compliance
August 2013	DPW appeals the permit with the intent to negotiate a settlement that considers some changes to the permit but mainly allows for a schedule to come into compliance
Spring 2014	Negotiated consent order allowing Town until 2020 to come into compliance commenced. First major deadline is submission of completed CWMP to EPA on December 15, 2015

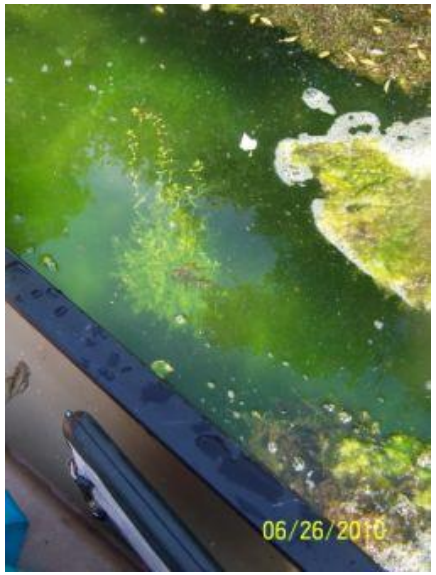
Background

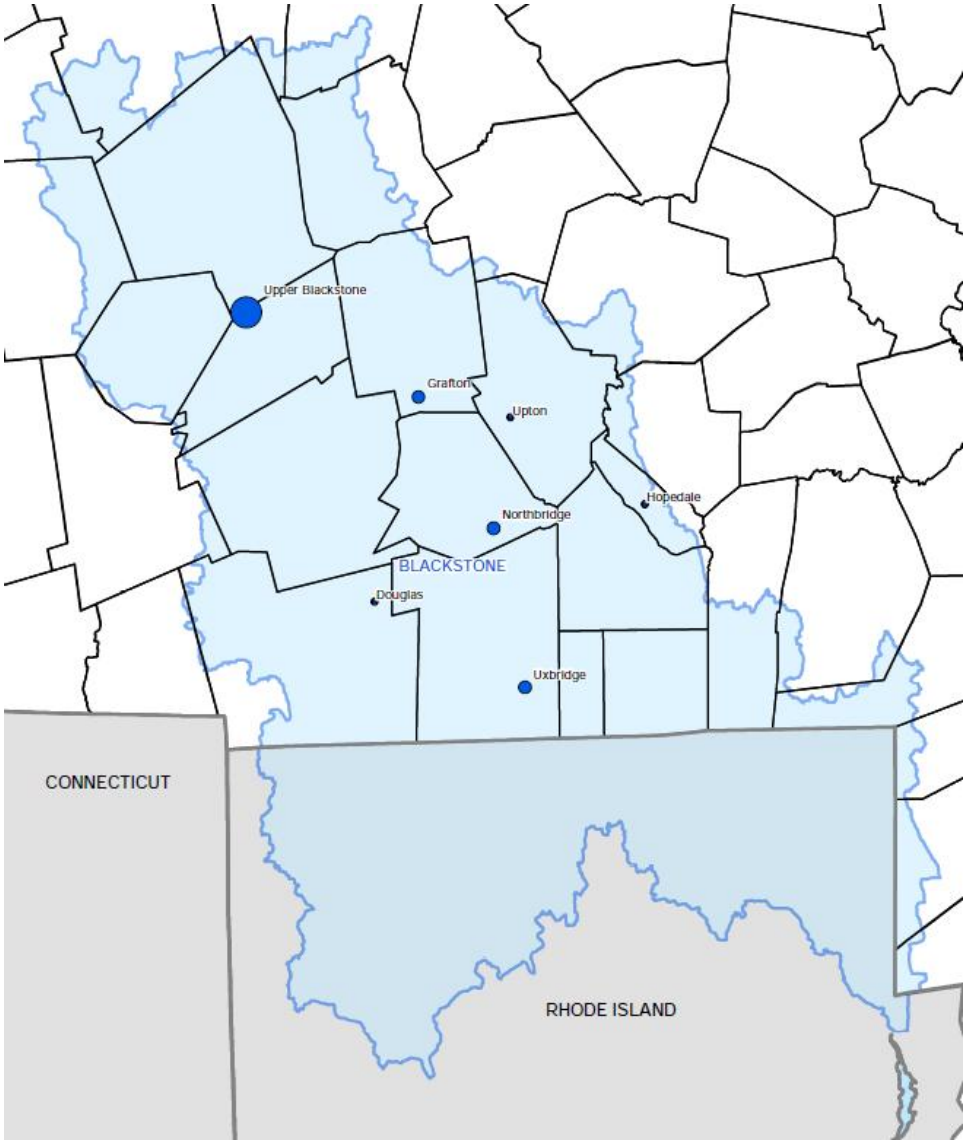
- Approximately half of the population is connected to the Town's collection system, including:
  - Majority of commercial district
  - Municipal buildings
    - Elementary School
    - Middle School
    - High School
    - Police Department
    - Department of Public Works
    - Town Hall



Background

- WWTF discharges like yours are contributing to degradation of water quality
- All facilities on the Blackstone River and other similar water bodies are being impacted





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Comprehensive Wastewater Management Plan

Phase I – Needs Assessment - This is the first phase of Comprehensive Wastewater Management Planning and it involves the initial assessment of the wastewater needs for the Town of Uxbridge.

Uxbridge's wastewater needs will be defined by identifying the Town goals for wastewater management, evaluating the existing conditions, reviewing regulatory requirements, developing projections of the future conditions, and then comparing these goals and conditions to the wastewater limitations in the Town.

Phase II – Alternatives Evaluation

Phase III – Recommended Plan

Phase I Needs Assessment Conclusion

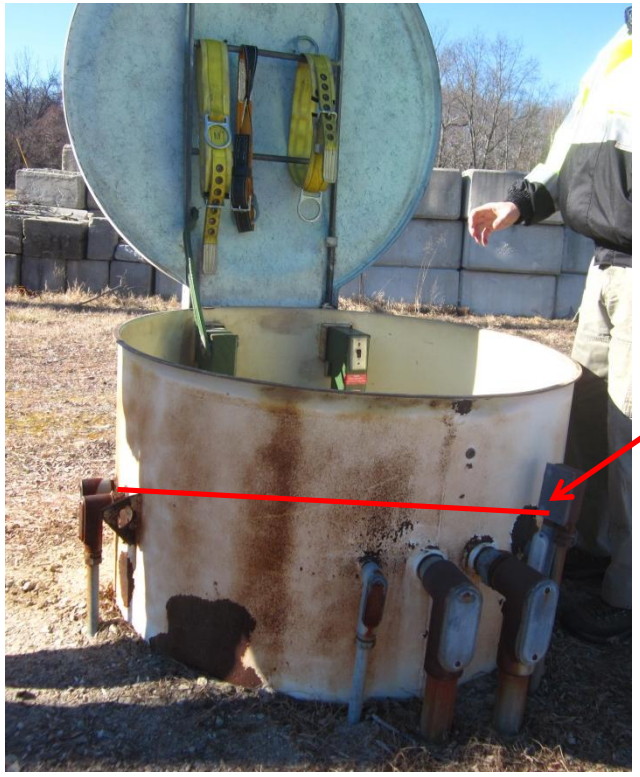
Conclusion:

Evaluation found no concentrated, problematic areas for on-site wastewater disposal. Although general indicators exist in all study areas for locations that may be problematic for on-site wastewater disposal sites, known conditions such as septic system failures and impaired groundwater quality did not indicate any portions of the Town that would be unsuitable for on-site wastewater disposal systems.

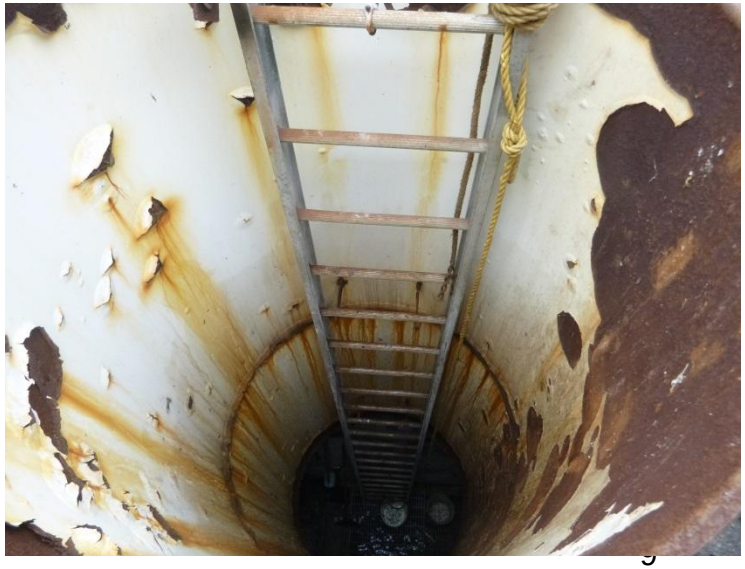
The existing centralized WWTF has age and permit related shortcomings that will be evaluated in Phases II and III.

- The facility is unable to meet the new permit
- Most components of the facility have far exceeded their useful life

Age and Permit Related Needs



Water elevation observed during flooding event



Comprehensive Wastewater Management Plan

Phase I – Needs Assessment

Phase II – Alternatives Evaluation - Once the needs are developed, alternative solutions will be identified. These solutions are then summarized and screened to retain only the most feasible ones. Feasible solutions (technical as well as management) are then grouped into alternative scenarios for detailed evaluation.

Phase III – Recommended Plan

Alternatives Recommended for Further Evaluation

- Structural components of the facility (tanks and buildings) are in good condition
- Focus on “Fix it First” alternatives (reuse of existing infrastructure)

Comprehensive Wastewater Management Plan

Phase I – Needs Assessment

Phase II – Alternatives Evaluation

Phase III – Recommended Plan – this will identify all recommendations from the Plan including what is required at the wastewater treatment facility and associated infrastructure to meet the new permit and upgrade facilities that have far exceeded their useful life.

- Recommended Plan currently in development.

Two Questions for the Board

1. Should the Town continue to take septage?
2. How should the recommended plan be financed
    1. CIFs
    2. Tax base
    3. Combination of both

Question #1 - Septage Acceptance

Required infrastructure to continue to accept septage at the WWTF:

- Septage Receiving Station in a building
- Expanded secondary treatment process (additional tankage)

Septage Costs

	Current	Town Septage Only **	2013 Septage Quantities
Capital Costs		$3,700,000	$6,800,000
Annual Debt Service		$230,000	$420,000
Annual O&M Costs		$50,000	$80,000
Annual Septage (gal)		1,375,000	4,230,000
FY11 – FY 13 Septage Revenue	$236,000 - $290,000		
Fee ($/1000 gal)	$75	$204	$118
Break Even Rate Increase*		172% Increase	58% Increase

* Rate increase required to **break even** for upgraded septage infrastructure

** Explored use of excess capacity as a revenue source, but this would also cause an increase in rates by approximately 45%

Question #1

- Septage receiving facilities at the existing WWTF are inadequate
- Septage from within the Town does NOT have to come to the Town WWTF
- Septage receiving is not provided by all towns
- Upgrading for future septage receiving could potentially cost more than revenue received from accepting septage

Would the Town like to continue to receive septage?

Question #2

How should the recommended plan be financed

a. CIFs
b. Tax base
c. Combination of both

Financing Options

- State Revolving Fund Loans
  - Twenty year, low interest (2%) loans available for both water (drinking water) and wastewater (clean water) projects
  - Twenty year, 0% loans available for qualifying programs under the Clean Water SRF for nutrient related projects
  - Approximately 60% of WWTP improvement project is potentially eligible for 0% financing.
- USDA
  - Explored but determined to be not advantageous at this time

0% Funding Requirements

- 0% financing requirements:
  - Only nutrient removal related projects eligible
  - Facility not subject to nutrient based violation
  - Community must have a MassDEP approved CWMP
  - In compliance with regional water resources management plan
  - Flow neutral regulations or bylaw required

Financing Options

Tentative Planning Level Project Costs

- Wastewater Treatment Plant Improvements (no septage) - $36,000,000
- West River Pump Station - $1,800,000

Three financing options:

(1) Entire project cost financed through new Capital Improvement Fee (CIF) for sewer users

(2) Entire project cost financed through general tax base

(3) Project cost financed through both new CIF for sewer users and general tax base. For example: one financing option is to finance age related improvements through CIFs and permit related improvements through general tax base.

WWTF Improvements Draft Financing Options (including West River, no septage)

Financing Option (no septage or pump stations)	Annual General Tax Base Debt Service	Quarterly WWTF Improvements CIF
100% Funded by CIF	$0	$146.31 ($585.25 annually)
0% Funded by CIF	Average tax bill = $381.82	$0
One option of CIF and Tax Base: Age Related Improvements Funded by CIF (~38%)	Average tax bill = $236.73	$55.60 ($222.39 annually)

- Planning level costs presented in this table are for WWTP improvements only (no septage acceptance costs)
- Financing options based on obtaining a State Revolving Fund (SRF) loan and meeting requirements for 0% funding for nutrient related portions of the project.
- Average tax bill is value on home valued at $273,923
- CIF rate is based on current number of Sewer CIFs (3439)

Wastewater CIFs – Existing and Proposed

Fee per Dwelling Unit Quarterly		
Capital Improvement Fee	**Wastewater**	**Water**
Wastewater CIF #1	$6.66	
Wastewater CIF #2	$3.41	
Wastewater CIF #3	$2.06	
Proposed Wastewater CIF #4 – West River PS & WWTF Improvements	$0 – $146.31	
Water CIF #1		$6.36
Water CIF #2		$22.05
Water CIF #3		$14.47
Total Water CIFs		**$42.88**
Total WW CIFs	**$12.13 - $158.44**	
Total Quarterly Water & WW CIFs	**$55.01 - $201.32**	

Talking Points

Benefits of the project to the Town as a whole include:

- Town responsible for fines incurred due to permit violations
- Environmental benefits of upgraded WWTF shared by general population
- Majority of commercial/municipal infrastructure relies on WWTF

How are projects of this size typically funded?

- Based on discussions with the State, large municipal WW projects are typically funded through a combination of the general tax base and CIFs financing

What is the status of the project costs?

- Costs are planning level costs (big picture costs)
- Goal is to refine and find opportunities to lower the costs through conceptual design and value engineering

Question #2

How does the Town wish to fund wastewater infrastructure improvements?

(1) Entire project cost financed through new Capital Improvement Fee (CIF) for sewer users

(2) Entire project cost financed through general tax base

(3) Project cost financed through both new CIF for sewer users and general tax base. For example: one financing option is to finance age related improvements through CIFs and permit related improvements through general tax base.

Next Steps

- Project is under consent order schedule
  - Completion of CWMP
  - Presentation of entire plan

- Guidance requested by next BOS meeting in order to continue to work toward meeting the consent order schedule

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  2. How should the recommended plan be financed
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